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ABSTRACT

The construction and evaluation of the Perception of Social Closeness Scale (PSCS) is described. The PSCS, designed to measure classroom social distance, is modeled after the Classroom Social Distance Scale and is constructed in a manner to be used with classroom teachers. Following a description of the scale's development, items were selected to construct a five item scale with consideration given to ambiguity (as evidenced by low Q values), the relevance of the items content, and the need for statements representing varying degrees of acceptance along the continuum from positive to negative. The format of the PSCS requires a horizontal placement of subjects and a vertical listing of statements. Classroom students and teachers are asked to place a check in the space opposite the one statement which most clearly expresses their feelings about the person. Test-retest reliability for PSCS gave a Pearson r of .780, using 29 grade 2 students on two consecutive days. Reliability using 20 teachers gave an r of .924. Concurrent validity gave a Spearman rank correlation coefficient of .971 for 10 boys and .772 for 11 girls using 21 grade 3 students on two consecutive days. (RL)

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# Assessment of Classroom Status: Using the Perception of Social Closeness Scale

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Running Lead: Classroom Status

A preliminary revision of this paper was presented at the 86th Annual Meeting of the American Psychological Association, San Francisco, August, 1977.

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## Abstract

Classroom status or the degree to which an individual is accepted by peers is of considerable importance. The development of a scale for the measurement of classroom status is described which should facilitate endeavors of researchers, psychologists and teachers working in the area of interpersonal relationships. Reliability and validity of the scale are fairly high and the instrument has been successfully used in a number of investigations.

## Assessment of Classroom Status

Classrooms contain groups of uniquely different students with such factors as age, intelligence, achievement, socio-economic status, appearance, motivation, athletic prowess and social skills contributing to the over-all social status assigned individuals by peers as well as teachers. While some students are well liked, others are less preferred by the group and a few are often, for the most part, rejected. The degree to which an individual is accepted during early years by his peers and teachers, is however, of considerable importance since this acquired status appears related to a number of factors in later life. For example, social status has been correlated to mental health in adulthood (Kohn and Clausen, 1955; Cowen et al., 1973), suicide (Stengle, 1951), delinquency (Roff, Sells and Golden, 1972), and high school completion (Ullman, 1957). Although some studies have demonstrated that social acceptance remains fairly stable (Hartup, Glazer and Charlesworth, 1967; Wertheimer, 1957), intervention techniques may successfully alter peer interactions (O'Connor, 1969).

The passage of P.L. 93-380 and P.L. 94-142 and the subsequent implementation of state mandates for the appropriate education of all handicapped students provides for student participation in the "mainstream" to the extent possible. What must be of concern, however, are the attitudes and expectations of professionals and peers toward the handicapped since for the most part, "normal," "achieving" students seem to be most admired and accepted by both peers and teachers. Thus, learning disabled, speech handicapped, amputees, crippled, retarded and disturbed may share the experience of rejection (Horne, 1979).

Recently, Hardin (1978) expressed the need for an ecological approach

to the treatment of the learning disabled student. Among the factors discussed which professionals must consider are teacher and pupil relationships. Similarly, Thurman and Lewis (1979) called for the development of an ecologically sound environment for both handicapped and non-handicapped students and pointed out the need for intervention strategies designed to modify social interactions. An awareness of teacher and peer attitudes is, of course, necessary for the development of modification or reinforcement programs.

A critical review of the measurement techniques used in investigations of classroom relationships indicates questionnaires, ranking and rating procedures, adjective checklists, and the semantic differential rating technique have been used; most, however, have been developed to satisfy the specific needs of researchers and are not necessarily appropriate for use by classroom teachers. Perhaps most commonly employed is the sociogram. Peer nomination (Moreno, 1934), a procedure often used, requires group members to indicate choices for companions on the basis of some criterion. For example, McGinley and McGinley (1970) asked first grade students with which classmates they prefer to work. In another study Soldwedel and Terril (1957) required that students respond to the following three questions: (1) Whom would you like best to sit by in class? (2) Whom would you like best to play with? (3) Whom would you like to take to your house to a party?

Such sociometric procedures are undoubtedly useful in determining the attitudes classroom members have toward each other. Noll and Scannell (1972), however, also pointed out the limitations of sociometrics. A major shortcoming is that they do not require students to respond in some way to

each and every other student in the class. Generally only two or three choices are requested of students. Consequently, discrepancies among positive and negative feelings toward classroom members are not revealed. A second major shortcoming involves the requirement that students may be asked to name 'rejects' or students with whom they prefer not to associate (see for example Lorber, 1973; Stilwell, Brown and Barclay, 1973). Recognizing the disagreement within the literature regarding the effect of this procedure, Noll and Scannell suggest negative responses be eliminated since they tend to, "emphasize negative feelings which would appear to have some undesirable aspects" (p. 458).

In an effort to obtain a more precise measure of student responses toward each other, the Classroom Social Distance Scale was devised at the Horace Mann-Lincoln Institute of School Experimentation (1957). This instrument, an ordinal scale consisting of five social distance type items has several advantages: Measurement of attitudes of the total group toward each other or social tone of class, the capability to assess subgroup status and opportunity for responses from each pupil toward every other class member. Roistacher (1974) delineated such attributes as being desirable, pointing out this type of roster-rating approach also controls for students being eliminated as choices due to forgetfulness on the part of classmates which may occur when using the nominating technique.

This report describes the construction and evaluation of the Perception of Social Closeness Scale (PSCS) designed to measure classroom social distance which was modeled after the Classroom Social Distance Scale, however, constructed such that the instrument could also be used with classroom teachers, a procedure similar to that used by Marge (1966) who developed

sociometric questionnaires for use by both groups. As an interval scale, it was anticipated that the instrument would be more sensitive to group member attitudes. Measuring the degree of differences in the status of individuals would also facilitate the endeavors of researchers, teachers and psychologists working within the area of interpersonal relationships.

## Method

### Scale Development

Bogardus (1925) developed the original social distance scale which provided for ordinal level measurement of attitudes. He discussed the concept of social distance as referring "to the degrees or grades of understanding and feelings that persons experience regarding each other" (p. 216). In order to measure social distance toward various nationalities, Bogardus developed a scale containing seven statements. Respondents were asked to indicate whether or not they would accept an individual from a nationality group as "close kinship by marriage" the most positive statement, or instead "would exclude from my country," the most negative statement.

Thurstone and Chave (1929) later developed a method for assigning specific scale values to items or statements representing different degrees of favorable attitudes along a psychological continuum from positive to negative. Their procedures (excepting actual calculations of the Q and scale values discussed in the following paragraphs) was utilized in the development and selection of items for the PSCS.

Professionals and students from a variety of grade levels and speciality areas were asked to contribute statements for the scale which they felt expressed a relationship or feeling they might possess toward students, or which peers might express toward each others. In editing the list of state-

ments several criteria were applied: (a) statements should be brief; (b) statements should be readable and understandable to a second grade population; (c) statements should reflect relationships or feelings that teachers might have for students and students toward each other; (d) statements should be fairly positive in nature, so that statements such as "Wish he weren't in my class," or "Don't want to have anything to do with him" would not be included.

In accordance with the procedures developed by Thurstone and Chave 240 subjects were asked to sort the final list of 46 statements developed into 7 "piles" or categories which they believed expressed their varying degrees of social distance. The population of sorters was made up of professors, teachers and students. Of the 240 returns, 96 were judged invalid. Thurstone and Chave state that:

> ...one must expect that some subjects will do their task in a perfunctory or careless manner. It is also possible that some subjects fail to understand the experiment or fail to read the mimeographed instructions carefully enough to understand just what is wanted (p. 32).

The authors eliminated the responses of subjects who had placed 30 or more statements in any one of the 11 "piles". In the present study, subjects who placed 17 or more statements in any one "pile" were eliminated. This figure was determined to be reasonable as it represents a percentage comparable to that used by Thurstone and Chave. Returns missing statements (7) and those in which empty categories appeared (8) were also judged invalid. A breakdown of the sorting population appears in Table 1.

Graphical procedures were used by Thurstone and Chave to determine the degree to which the attitude statements they developed might be ambiguous;

the method for identifying the scale values for each statement was also graphical in nature. The formula procedure for constructing an attitude scale using the equal-appearing intervals method reported in Edwards (1957), however, is considerably easier to use and yields comparable results. Consequently, this method was employed to determine the ambiguity[1] (indicated by Q values) and scale values[2] for the statements.

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Insert Tables 1 and 2 about here

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## Results

Items were selected to construct a five item scale with consideration given to ambiguity (as evidenced by low Q values), the relevance of the items content, and the need for statements representing varying degrees of acceptance along the continuum from positive to negative (as indicated by their scale value). These items are shown in Table 2. The format of the PSCS[3] is similar to that of the Classroom Social Distance Scale and, as may be seen in Figure 1, requires a horizontal placement of subjects and a vertical listing of statements. Classroom students and teachers are asked to place a check in the space opposite the one statement which most clearly expresses their feelings about the person.

Test-retest reliability for the scale was determined using a sample of 29 second graders who were administered the instrument on two consecutive days. A Pearson r of .780 was obtained. This is quite high when compared to correlation coefficients reported by Gronlund (1959) for elementary grade students. Reliability using a sample of 20 teachers was also high ($r = .924$). Concurrent validity was established using a sample of 21 third graders. These students completed the PSCS and on the following day were

asked to identify the three children in the class they would like to have as their best friends. The number of times students were chosen was correlated with the number of times the student was checked on item one, the most favorable statement on the 5 item PSCS. The responses of the boys (10) and girls (11) were tabulated separately. A Spearman rank correlation coefficient of .971 was obtained for boys and a correlation of .772 for the girls.

It should be noted that Thurstone and Chave suggest the validity of an attitude scale constructed according to their procedure rests on the independence of the judgements of the sorters. That is, the scale is valid if the opinions they have do not affect the sorting. To further evidence the validity of the PSCS 42 college students were asked to rank each of the 46 statements from most positive to most negative using a 5 point Likert scale. The results correlated highly (rho = .96) with those obtained through sorting.

## Conclusion

Since its development the PSCS has been successfully used in a number of investigations dealing with the assessment of classroom status (Horne and Harasymiw, 1975; Horne, Seidner and Harasymiw, 1978; Seidner, Harasymiw and Horne, 1976). It has also been used to measure student attitudes toward disability and occupation groups (Harasymiw, Horne and Lewis, 1976a, 1976b, 1977) wherein disability labels were substituted for student names. The results when correlated with rankings obtained using a variety of social distance type measures are highly significant providing additional support for the validity of the instrument. Summarily, the PSCS has been shown to be a promising procedure for eliciting teacher and peer attitudes toward

classroom members.

The PSCS has several advantages over traditional sociometric procedures. Two very important features are:

1. Scale items are positively oriented so that negative effects related to having children named 'rejects' are eliminated.

2. The scale yields interval level data which facilitates statistical analysis as well as evidencing the degrees of difference in the individual status of all classroom members.

The scale also provides for the opportunity to obtain measures of:

3. Students' perceptions of their social status in the group. Students respond to their own name on the Scale as follows: "When you come to your own name, check the sentence which describes how you think most of the boys and girls feel about you and will check for you."

4. Students' attitudes toward their teacher. Children respond to the question, "When you come to your teacher's name, check the sentence which best describes how you feel about your teacher.

5. Teacher attitudes toward students. Teachers may respond to the question, "Check the sentence which best describes how you feel about each student."

6. Students at different age levels. The statements are readable and understandable by a second grade population but may also be appropriately used with students up to high school age.

It should be noted that the development of the PSCS involved the computation of scale and Q values for 46 items. Thus, professionals seeking to measure classroom social distance may prefer to select other items from this compilation for administration (recognizing the importance of low Q values and the need for statements to have scale values approximately equally

spaced along the psychological continuum). They may also choose to make adjustments in the number of items employed (as few as 3 items with young students and up to 7 with older populations). Correlating findings using the new form with findings using the five item scale presented can provide a measure of realiability.

In summary, if both handicapped and non-handicapped students are to actualize their potential, educators must concern themselves with the issue of attitudes. The major contribution of this study is to demonstrate one technique whereby attitudes may be measured. Hopefully, interest in attitudinal measurement will be promoted; more importantly efforts will be directed not only toward recognition of a student's status but will result in the initiation of innovative programs and procedures designed to develop and reinforce positive attitudes toward individual differences in the classroom.

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Footnotes

1 A measure of an item's ambiguity is obtained by determining the degree of variation of the distribution of judgements for a particular item. The interquartile range (or Q value) is a measure of the variability of the judgements of the middle 50 percent of the judging population. If agreement among judges is high, Q values will be low; conversely, when judges differ in their estimation of a statement's favorability, Q values are high.

2 To determine the scale value of an attitude statement the frequency of sortment of a statement into a "pile" or category by the judges, proportion of times judges sorted the statements in a particular category and the cumulative proportions (or proportion of sorts into a category, and the sum of those below the category) must be computed and tabled. The formula then applied is:

$$S = l + \left(\frac{.50 - \sum pb}{pw}\right) i$$

s = the median or scale value of the statement

l = the lower limit of the interval in which the median falls

$\sum pb$ = the sum of the proportions below the interval in which the median falls

pw = the porportion within the interval in which the median falls

i = the width of the interval and is assumed equal to 1.0

Edwards should be consulted for a more detailed discussion of these calculations.

3 Copies of the Scale are available upon request from the author along with directions for administration.

Table 1

Breakdown of Sorting Population

| | Total Returns | Total Invalid | Total Valid |
|---|---|---|---|
| Professors, School of Education | 16 | 3 | 13 |
| Doctoral Teaching Fellows | 7 | 4 | 3 |
| Junior High School Teachers | 8 | 2 | 6 |
| Elementary School Teachers | 17 | 3 | 14 |
| Special Education Teachers: | | | |
| Elementary | 3 | 0 | 3 |
| Junior High | 1 | 0 | 1 |
| Student Teachers: | | | |
| Elementary | 5 | 0 | 5 |
| Junior High | 2 | 0 | 2 |
| Eighth Grade Students | 39 | 13 | 26 |
| Seventh Grade Students | 24 | 12 | 12 |
| Sixth Grade Students | 51 | 22 | 29 |
| Fourth Grade Students | 67 | 37 | 27 |
| | 240 | 96 | 141 |

Table 2

Scale and Q Values for Judged Items

| | Scale Value% | Q | Item |
|---|---|---|---|
| 1. | 1.2747 | 3.3408 | Would like to be a member of my family |
| 2. | 1.4038 | 2.4063 | Would like to spend the whole day with. |
| 3. | 1.4400 | 1.7634 | Would like to always be in my class. |
| 4. | 1.6191 | 3.1840 | Would like to make feel happier. |
| 5. | 1.6751 | 3.2351 | Would like to give a Christmas present to. |
| 6. | 2.0341 | 1.2501 | Would like to be with more. |
| 7. | 2.0407 | 1.7785 | *Would like to invite to my home. |
| 8. | 2.1144 | 2.0575 | Would like in my class all day. |
| 9. | 2.1196 | 1.8436 | Would like to spend more time with. |
| 10. | 2.1546 | 2.1232 | Would like to live next door. |
| 11. | 2.2241 | 1.3585 | Would like to visit after school. |
| 12. | 2.2344 | 3.1453 | Would like to work with alone. |
| 13. | 2.2833 | 1.7006 | Would like to become better friends with. |
| 14. | 2.2926 | 1.9946 | Would like to become friends with. |
| 15. | 2.3068 | 1.9149 | Would like to be a friend of my family. |
| 16. | 2.4343 | 2.0843 | Would like to have sit near me. |
| 17. | 2.4657 | 2.2084 | Would like to visit on weekends. |
| 18. | 2.5108 | 1.5510 | Would like to be able meet after school. |
| 19. | 2.6323 | 1.9447 | Would like to get to know better. |
| 20. | 2.6618 | 1.9079 | Would like to meet their family. |
| 21. | 2.6667 | 2.2080 | Would like to see on weekends. |
| 22. | 2.8149 | 2.6302 | Would like to go on a field trip with. |
| 23. | 2.9657 | 2.5180 | Would like to live on my street. |
| 24. | 3.0132 | .4292 | *Would like to spend time with on the playground. |
| 25. | 3.0176 | 1.9255 | Would like to help out with their work. |
| 26. | 3.1249 | 2.5080 | Would like to live in my neighborhood. |
| 27. | 3.1449 | 2.2876 | Would like to belong to my after school group. |
| 28. | 3.2069 | 2.9275 | Would like as the class president. |
| 29. | 3.2258 | 2.4150 | Would like as a helper in school. |
| 30. | 3.2431 | 2.0376 | Would like to talk to outside of class. |
| 31. | 3.2829 | 2.3776 | Would like as the group leader. |
| 32. | 3.3816 | 2.1251 | Would like to work with in a small group. |
| 33. | 3.5532 | 2.2294 | Would like to show how to play a game. |
| 34. | 3.7391 | 3.4086 | Would like to belong to my church. |
| 35. | 4.3338 | 2.1956 | Would like to be in my class part of the day. |
| 36. | 4.4596 | 2.4555 | Would like to spend only part of the day with. |
| 37. | 4.5493 | 2.2149 | Would like to be a friend but not in my class. |
| 38. | 4.7402 | 1.9675 | *Would like to spend some time with once in a while. |
| 39. | 4.9428 | 2.3734 | Would like to talk to once in a while. |
| 40. | 5.0513 | 1.9839 | Would like in my class once in a while |

Table 2 (Continued)

Scale and Q Values for Judged Items

| | Scale Value% | Q | Item |
|---|---|---|---|
| 41. | 5.3909 | 2.7210 | *Would like to be more like other students. |
| 42. | 5.4513 | 2.3460 | Would like to behave in a different way. |
| 43. | 5.7652 | 1.7171 | Would like in my class but not near me. |
| 44. | 5.9334 | 1.9671 | Would like to ask me less questions. |
| 45. | 6.1804 | 1.9685 | Would like to talk to less. |
| 46. | 6.8027 | 1.5677 | *Would like to leave me alone. |

% Statements indicating greater acceptance have lower scale values; higher values are indicated for more negative statements.

* Included on five item scale.

Figure 1
Perception of Social Closeness Scale

Name _____ Circle one: Student Teacher

School _____ Grade _____ Date _____

| | Linda | Marge | Barbara | John | Marshall | Lorraine | Edward | Debby | Your Teacher |
|---|---|---|---|---|---|---|---|---|---|
| 1. Would like to invite to my home. | | | | | | | | | |
| 2. Would like to spend time with on the play | | | | | | | | | |
| 3. Would like to spend some time with once in a while. | | | | | | | | | |
| 4. Would like to be more like other students. | | | | | | | | | |
| 5. Would like to leave me alone. | | | | | | | | | |